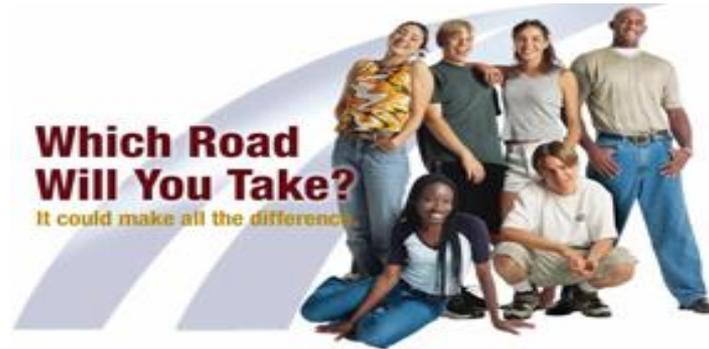


Career Technical (CTE) Education in Vermont

Jay Ramsey, State Director of CTE

2/15/17





Priorities for Governor Scott

- Affordability
- Growing the Economy
- Protecting our vulnerable students

Career and Technical Education

Affordability: CTE provides access to industry-recognized credentials, postsecondary credentials and high-wage jobs.

Growing the Economy: CTE links students to employers in high-growth, high-priority VT economic sectors (e.g. Health Sciences, Advanced Manufacturing)

Protecting the vulnerable: Applied, “hands on” nature of CTE coursework has proven effective in developing high levels of skill in populations that do not always thrive in regular classrooms, and has proven successful in moving first generation students and students living in poverty towards postsecondary credentials.

What is CTE?

- Programs of study that help students develop college and career readiness through gaining skills, technical knowledge, strong academic foundation and real-world experience for high-skill, high-demand, ideally high-wage careers



CTE at the AOE

Career & Technical Ed

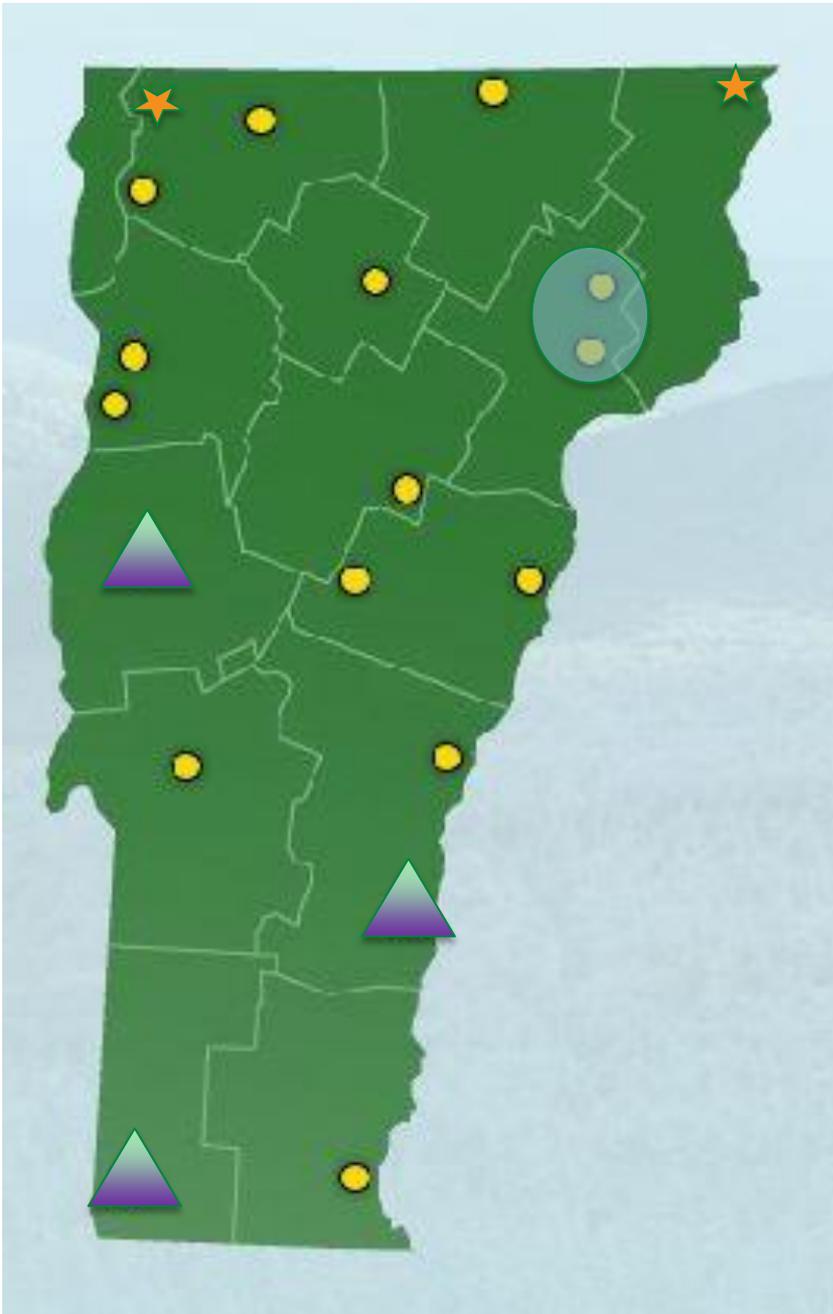
Jay Ramsey
Ed Programs Mgr
770455

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- 100% funded by the Federal government, tasked with implementing and monitoring Perkins Act
- This year, likely to be involved in reauthorization of Perkins and associated rulemaking

Diverse Governance Statewide



-  Independent Technical Center Districts
-  Satellite location/comprehensive high school
-  Independent Schools hosting technical education programs
-  Full or part-time regional career centers



PAST

Vocational Education

For a Few Students

For a Few "Jobs"

6 to 7 "Program Areas"

In-lieu of Academics

High School Focused

100 years of progress



PRESENT

Career and Technical Education

For All Students

For All "Careers"

16 Career Clusters with 79 Pathways

Integrated with Academics

High School and College Partnerships

Career Clusters & Pathways

- Marketing, Sales, and Service**
- ❖ Buying and Merchandising
 - ❖ Distribution and Logistics
 - ❖ e-Marketing
 - ❖ Management and Entrepreneurship
 - ❖ Marketing Communications & Promotion
 - ❖ Marketing Info. Management & Research
 - ❖ Professional Sales & Marketing

- Business, Management, and Administration**
- ❖ Administrative and Information Support
 - ❖ Business Analysis
 - ❖ Business Financial Management and Accounting
 - ❖ Marketing
 - ❖ Human Resources Management

- Hospitality and Tourism**
- ❖ Lodging
 - ❖ Recreations, Amusements, and Attractions
 - ❖ Restaurants and Food and Beverage Services
 - ❖ Travel and Tourism

- Law, Public Safety, and Security**
- ❖ Correction Services
 - ❖ Emergency and Fire Management Services
 - ❖ Law Enforcement Services
 - ❖ Legal Services
 - ❖ Security and Protective

- Government and Public Administration**
- ❖ Revenue and Taxation
 - ❖ Foreign Service
 - ❖ Governance
 - ❖ National Security
 - ❖ Planning
 - ❖ Public Management & Administration
 - ❖ Regulation

Note: High skill, wage and demand pathways are underlined.

- Finance**
- ❖ Banking & Related Services
 - ❖ Business
 - ❖ Financial Management
 - ❖ Financial and Investment Planning
 - ❖ Insurance Services

Business Systems

Public Services

- Education & Training**
- ❖ Administration and Administrative Support
 - ❖ Professional Support Services
 - ❖ Teaching / Training

- Agriculture, Food, and Natural Resources**
- ❖ Animal Systems
 - ❖ Food Products
 - ❖ Agribusiness Systems
 - ❖ Environmental Service Systems
 - ❖ Natural Resources Systems
 - ❖ Plant Systems
 - ❖ Power, Structural, and Technical Systems

Agriculture & Natural Resources

- All Aspects of Industry K & S**
- Business Enterprise
 - Core Business * Entrepreneurship *
 - Customer Focus * Health/Safety *
 - Occupational/Technical
 - Academic * Technical * Meta
 - 21st Century
 - Critical Thinking * Problem Solving
 - *Creativity * Innovation *
 - Teamwork/Collaboration *
 - Communications * Information Literacy *
 - ICT Literacy * Leadership & Responsibility *
 - Adaptability * Initiative/Productivity *
 - Lifelong Learning

Health & Human Services

- Human Services**
- ❖ Consumer Services
 - ❖ Counseling & Mental Health Services
 - ❖ Early Childhood Development & Services
 - ❖ Family & Community Services
 - ❖ Personal Care Services

- Health Sciences**
- ❖ Biotechnology Research and Development
 - ❖ Diagnostic Services
 - ❖ Supportive Services
 - ❖ Health Informatics
 - ❖ Therapeutic Services

Arts & Communications

Engineering & Technical Systems

- Arts, A/V Technology, & Communications**
- ❖ Audio/Video Techniques
 - ❖ Journalism and Broadcasting
 - ❖ Performing Arts
 - ❖ Printing Techniques
 - ❖ Telecommunications Techniques
 - ❖ Visual Arts

- Information Technology**
- ❖ Information Support & Services
 - ❖ Interactive Media
 - ❖ Network Systems
 - ❖ Programming & Software Development



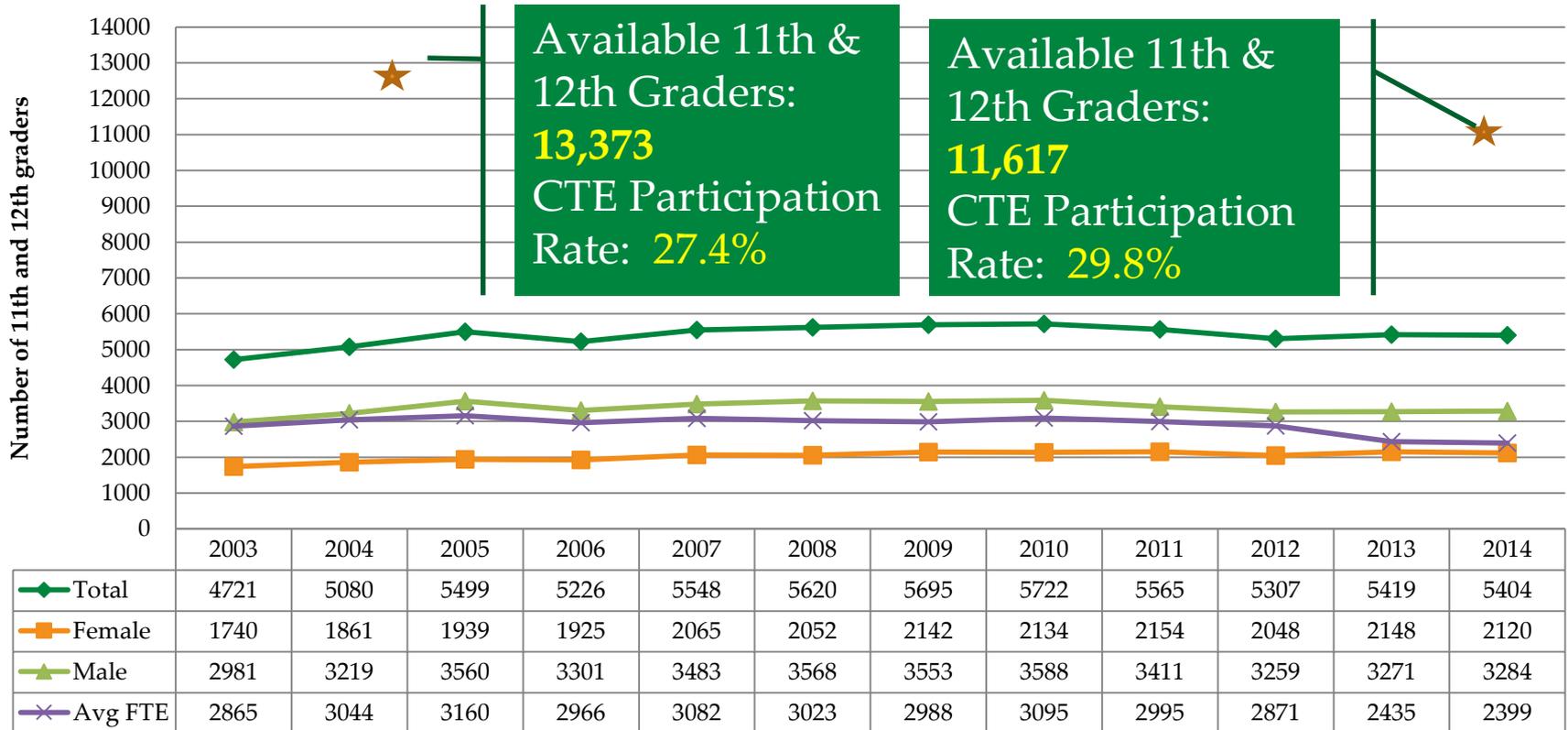
- Transportation, Distribution, & Logistics**
- ❖ Facility/Mobile Equipment Maintenance
 - ❖ Health, Safety, & Environmental Management
 - ❖ Logistics Planning & Management Services
 - ❖ Sales & Services
 - ❖ Transportation Operations
 - ❖ Transportation/Systems Infrastructure
 - ❖ Warehousing and Distribution Operations

- Science, Technology, Engineering, & Mathematics**
- ❖ Engineering & Technology
 - ❖ Science & Math

- Architecture & Construction**
- ❖ Construction Design & Pre-construction
 - ❖ Maintenance & Operations

- Manufacturing**
- ❖ Production
 - ❖ Production Development
 - ❖ Maintenance, Installation, & Repair
 - ❖ Quality Assurance
 - ❖ Logistics & Inventory Control
 - ❖ Health, Safety, & Environmental

State of Vermont 10 Year Secondary CTE Participation Rate Trend



The proportion of our total student population that is participating in CTE is GROWING statewide.

HEALTH CAREERS PROGRAMS

Fall '16

Cold Hollow Career Center	Health Careers	16
North Country Career Ctr.	Health Careers	38
Northwest Technical Center	Health Careers	37
Patricia Hannaford Career Ctr	Health Careers	14
Randolph Technical Career Ctr	Health Careers	13
River Bend Career & Tech Ctr	Health Careers	20
River Valley Technical Center	Health Careers	25
Stafford Technical Center	Health Careers	17
SW VT Career Development Ctr	Health Careers	26
Windham Regional Career Ctr	Health Careers	40
Essex, Center for Technology Ed	Dental Assisting	18
Essex, Center for Technology Ed	Health Information Management	13
River Valley Technical Center	PTF Health Science	20
SW VT Career Development Ctr	PTF Health Science	30

HUMAN SERVICE PROGRAMS

Fall '16

Central VT Technical Center	Human Services	11
North Country Career Ctr.	Human Services	21
Northwest Technical Center	Human Services	21
Patricia Hannaford Career Ctr	Human Services	10
Randolph Technical Career Ctr	Human Services	10
River Valley Technical Center	Human Services	18
St. Johnsbury Academy	Human Services	21
Stafford Technical Center	Human Services	15
SW VT Career Development Ctr	Human Services	15
Northwest Technical Center	PTF Human Services	16
River Bend Career & Tech Ctr	PTF Human Services	4
St. Johnsbury Academy	PTF Human Services	20
Windham Regional Career Ctr	PTF Human Services	16

Outcomes

Graduation Rate: 98-99% of CTE students who “concentrated” [completed at least half of the required sequence of instruction] their studies in technical education graduate from high school.

Placement: 93-97% of concentrators are employed or enrolled in postsecondary

Industry Recognized Credentials: 58.5% of concentrators left with an industry recognized credential, such as an LNA (Licensed Nurse Assistant), Game of Logging, or Cisco Networking Certification.

Dual Enrollment: 13.5% of CTE students received at least one transcribed course through dual enrollment (2014-15).

College Enrollment: 40% of Vermont students who participated in CTE were enrolled in postsecondary education within 12 months, 48% within 18 months. 59% enrolled in VT.

Dual Enrollment (2015-'16)

Course Name	Number of Students
Anatomy & Physiology I	11
Anatomy & Physiology II	14
Effective Speaking	<11
English Composition	<11
Human Biology	40
Human Growth & Development	18
Intro to Psych	<11
Introduction to Nutrition	<11
Legal & Ethical Issues in Health Care	14
Medical Terminology	79
Medicial Terminology	12
Survey of US History	<11
Grand Total	193

Industry Recognized Credentials

(2015-'16)

Credential Name	Earned
Heartsaver First Aid	168
Health Care Provider CPR	114
Heartsaver Automated External Defibrillator	75
Heartsaver CPR	227
Blood Borne Pathogens	111
Community First Aid and Safety	19
CPR/AED	<11
CPR/AED for Professional Rescuer	57
CPR-Child, Infant and Adult	47
First Aid	19
First Aid/CPR/AED	137
First Aid: Responding to Emergencies	13
Dental Radiology	18
Early Childhood Regulation Training	15
First Responder EMT	<11
Licensed Nurse Assistant	59
Vt Childcare ICC-3 Level 1 Assessments	<11



Statement of the Problem

- Population decline and increasing poverty are leaving Vermont business and industry (and state government) without the skilled workers they need to drive business growth and economic prosperity.
- High school graduates most likely to stay in Vermont are also the graduates with lower level of skill, less connection to postsecondary institutions, and less connection to high-wage career opportunities in the state.

AOE CTE Theory of Action

By investing in:

- a robust, high-quality **career advising and guidance system** that is aligned with high-wage, high-growth sectors;
- the development of employer-led **rigorous programs of study** that include **both secondary and postsecondary elements** and are embedded within transparent **career pathways** for high-skill, high-demand occupations;
- expanding student participation in **postsecondary programs** that lead to industry-recognized credentials or degrees that signal higher levels of skill

Vermont will improve the economic conditions of both the state and its individuals, including the conditions of historically marginalized and underserved groups.

How will we accomplish this?

- (1) Work with business and industry partners, and fellow Vermont Agencies, to identify high-wage, high-growth economic development sectors, and specific employer skill needs within those sectors. Use this needs assessment to inform selection of priority CTE sectors and the development of career pathways that introduce students to good career opportunities in VT.
- Alignment with Governor Scott's priority:
Growing the economy





How will we accomplish this?

(2) Use personalized learning plans, work-based learning, dual enrollment and high quality CTE instruction to move young Vermonters toward careers in these sectors.

- Alignment with Governor Scott's priority: Affordability (use existing statute to advance statewide CTE goals)

How will we accomplish this?

(3) Improve the academic rigor of CTE programs, by raising standards, infusing rigorous academics into career pathways, and increasing the porosity between traditional regular high school and CTE programming.

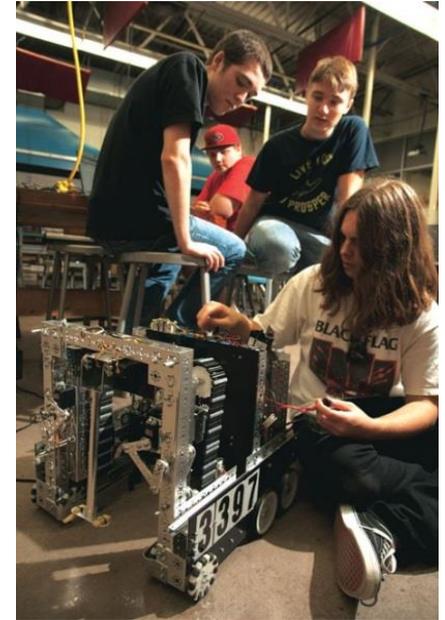


Alignment with Governor Scott's priority: Affordability (find cost-effective ways to share resources between CTE and gen ed)

How will we accomplish this?

(4) Improve postsecondary participation by students who are growing up in adversity or are the first in their families to go to college by leveraging dual enrollment, partnerships with colleges and CTE pathways to ensure that:

- beginning in middle school, students are exposed to the career opportunities in high-wage, high-growth sectors that are associated with post-secondary degrees or advanced IRCs, and
- while still in high school, students successfully earn college credits that move them towards these post-secondary goals.



Alignment with Governor Scott's priorities:
vulnerable populations, grow the economy

How will we accomplish this?

(5) In partnership with high schools, regional CTE centers, business and industry, the Department of Labor and postsecondary institutions, develop robust model career pathways in three high-priority sectors: **health careers, advanced manufacturing, and construction and green building design.**

- Pathways will integrate information about the education and training required at each step, relevant registered apprenticeships, work-based learning opportunities and employer-led training initiatives.
- Alignment with Governor Scott's priority: grow the economy

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- Alignment with Governor Scott's priority: grow the economy

Partners



Champlain Valley Area
Health Education Center

Southern Vermont
AHEC



Name: Eliza Kissam

Grade: Senior

Sending High School: Burlington
High School

Career Technical Education Center:
Burlington Technical Center,
Burlington, Vermont

Program: Sports and Medical Sciences
Program

Eliza is a second year student in the Sports and Medical Sciences Program at the Burlington Technical Center. The two-year program is accredited by Vermont Technical College and the Community College of Vermont and teaches students anatomy, physiology, human growth and development, nutrition and medical terminology.

Eliza, who is in the top of her class at Burlington High School, was recently accepted into Brown University early acceptance, where she plans to join the five-year program for a Bachelor's and Master's in Public Health, followed by medical school.

How will we accomplish this?

(6) Work with fellow state Agencies to identify the source of labor market information to be used as key performance indicators and a process for jointly reviewing and prioritizing findings based on this data.

- Alignment with Governor Scott's priorities: grow the economy, affordability

Building capacity to advance the work

- Currently there are no state funded CTE positions—we are dual-purposing federal dollars to the best of our ability.
- AOE will seek grant monies and leverage partnerships with business and industry to advance Career Pathways work in the short term.
- **State CTE Director serves as the Secretary's designee on the Health Care Work Force Work Group – part of the healthcare innovation project.**

Thank you.